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Tilo Schaefer

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EXAMINER

RIVELL, JOHN A

ART UNIT

PAPER NUMBER

3753

MAIL DATE

DELIVERY MODE

04/15/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/534,151	Applicant(s) SCHAEFER ET AL.	
	Examiner JOHN RIVELL	Art Unit 3753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 4/1/10 (RCE).
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14, 16-20, 22-26 and 28-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 25 is/are allowed.
- 6) ☒ Claim(s) 14, 16-20, 22-24, 26 and 28-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 1, 2010 has been entered.

Applicant's arguments filed April 1, 2010 have been fully considered but they are not persuasive.

Claims 1-13, 15, 21 and 27 have been canceled. Thus claims 14, 16-20, 22-26 and 28-34 remain pending.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 14, 16-20, 22, 24, 26, 28-31 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Albertson et al. (U. S. Pat. No. 5,577,389) in view of Weber (U. S. Pat. No. 4,633,681).

The patent to Albertson et al. discloses a “compressor (inherent in the refrigeration circuit), comprising: a safety device (shown in figures 1 and 2 at 9), for limiting high pressure within a chamber (the chamber at conduit 15 which is ultimately fluidly connected to the inherent compressor of the refrigerant circuit) of the compressor, comprising a rupture disk (17) and a pressure relief valve (27), the rupture disk (17) and the pressure relief valve (27) forming a region (volume 20) there-between, the rupture disk (17) having a first side (the side of conduit 15, facing arrow Y) connected to the compressor chamber and a second side (the side facing conduit 16 and volume 20) connected to the region (20), the rupture disk (17) hermetically sealing the chamber (within conduit 15) from the region (20) until a pressure of the compressor chamber exceeds a predetermined level (such as the level required to rupture disk 17), the pressure relief valve (27)... (is) configured to allow a ... release of the system pressure after the pressure of the compressor chamber exceeds the predetermined level (e.g. the burst pressure of disk 17)” as recited in claim 14.

Thus the patent to Albertson et al. discloses all the claimed features with the exception of having “a predetermined leakage of atmospheric pressure into the region while the pressure of the compressor chamber is below the predetermined level” as well as discussion of whether or not relief valve vents in a “slow” manner.

The patent to Webber discloses that it is known in the art to employ in a check valve device used in refrigeration circuits, as shown in figure 2 for example, which includes a fluid leak passage 22, 34 located within either valve seat 20, 32, respectively, which when the valve head at ball 18 is seated at either seat 20, 32, fluid is allowed to

pass through the otherwise closed valve element for the purpose of permitting fluid to pass an otherwise closed check valve element thus allowing for a slower, relative to a valve element which does not have a leak passage, buildup of pressure necessary to open the closed valve in the upstream passage and to allow for downstream pressure to bleed across the otherwise closed valve towards the upstream direction.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Albertson et al. a leak passage, located at the junction of the valve head and seat, in the check valve device 27 of Albertson et al. for the purpose of permitting fluid to pass an otherwise closed check valve element thus allowing for a slower, relative to a valve element which does not have a leak passage, buildup of pressure necessary to open the closed valve and to allow for downstream pressure to bleed across the otherwise closed valve towards the upstream direction as recognized by Webber.

Regarding claim 16, in Albertson et al., “the rupture disk (17) and the pressure relief valve (27) are arranged in series” as recited.

Regarding claim 17, in Albertson et al., “the compressor chamber is an exhaust chamber (the inlet to the device of Albertson et al. at 15 is connected to the “exhaust chamber” of the inherent compressor), and wherein the rupture disk (17) is pressurized on one side (at 15) with high pressure from the exhaust chamber and on the other side with the atmospheric pressure” when, as taught by Webber, the relief valve 27 includes a leak passage.

Regarding claim 18, in Albertson et al., “the pressure relief valve (27) is configured downstream of the rupture disk (17) from a high pressure side” as recited.

Regarding claim 19, Albertson et al., as modified by Webber, discloses the claimed invention except for “the pressure relief valve (being) configured to open at a lower opening pressure than a bursting pressure of the rupture disk.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to adjust the spring force of the relief valve 27 of Albertson et al., since it has been held that where the general conditions of a claim are disclosed as here in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Regarding claim 20, in Albertson et al., “the pressure relief valve (27) is configured to vent a refrigerant of the (inherent) compressor to the atmosphere” as recited.

Regarding claim 22, in Albertson et al., as modified by Webber, “the predetermined leakage (as a result of adopting a leak passage in the relief valve 27 of Albertson et al. as taught by Webber) is sufficient to prevent a pressure build up in the space (volume 20 of Albertson et al.) when the rupture disk (17) is intact” as recited.

Regarding claim 24, in Albertson et al., as modified by Webber, “the pressure relief (27 of Albertson et al.) valve comprises a valve seat, a valve piston, and further comprises at least one of a bypass groove, a bypass bore, and surface roughness or regularity at one of the valve seat and valve piston for realizing the defined leakage”. As taught by Webber, the “bypass groove” would be located in the “seat” as recited.

Regarding claim 26, in Albertson et al., as modified by Webber, “the pressure relief valve (27 of Albertson et al.) is configured to slowly release a residual refrigerant of the compressor through a predefined leak (as taught by Webber) in response to the pressure in the air-conditioning system dropping below a set pressure”, the “set pressure” being that at which relief valve 27 opens, as recited.

Regarding claim 28, the device of Albertson et al., as modified by Webber, discloses a “safety device (generally taught by Albertson et al.) for a compressor in an air-conditioning system of a motor vehicle, the safety device comprising: a rupture disk (17, Albertson et al.) in contact with a refrigerant of the air-conditioning system and configured to rupture when a pressure of the refrigerant exceeds a first predetermined pressure; and a pressure valve (relief valve 27 of Albertson et al.) disposed in a closed position downstream of the rupture disk (17), a predetermined leak (as taught by Webber) being associated with the pressure valve (27 of Albertson et al.) in the closed position so as to allow atmospheric pressure to contact a downstream side of the rupture disk (17) when the rupture disk (17) is intact and configured to allow a slow leak of the refrigerant when the rupture disk (17) is ruptured and when the pressure of the refrigerant is above a second predetermined pressure (the “second predetermined pressure” is any value of pressure remaining in the conduit 15 after rupture of the disk 17 and valve 27 has closed. For example, once disk 17 ruptures pressure in the system conduit 15 will fall as pressure is relieved to atmosphere through relief check valve 27. As the pressure falls, check valve 27 will eventually close. Once valve 27 is closed, in the modified state of having the leak passage, as taught by Webber, any remaining pressure in the system conduit 15 will in fact bleed through the modified head/seal area of check valve 27, in the manner recited in the claims), wherein the second predetermined pressure is lower than the first predetermined pressure (that causes rupture)” as recited in claim 28.

Regarding claims 29 and 30, in Webber at column 6, lines 5962 there is disclosure that:

“Materials other than steel or copper can be substituted such as other metals and certain plastics.”

The disclosed “certain plastics” are considered to at least include “an elastomer” as recited in claims 29 and 30. As such the patent to Webber discloses employing an “elastomer” as the material for valve seat(s) 20, 32. By inclusion of the leak passage 22, 34 in the seating surface as taught by Webber, the resulting combination would in fact include an “elastomer seal” at the seat of the relief valve 27 of Albertson et al.

Regarding claim 31, in Albertson et al., as modified by Webber, “the pressure relief valve (27 of Albertson et al.) comprises a valve seat, a valve piston (head), and further comprises a bypass groove (as taught by Webber) at one of the valve seat and valve piston for providing the predetermined leakage”, here at the “seat” as taught by Webber.

Regarding claim 34, in Albertson et al., as modified by Webber, “the pressure relief valve (27 of Albertson et al.) comprises a valve seat, a valve piston (head), and further comprises surface regularity (notch groove as taught by Webber) at one of the valve seat and valve piston for providing the predetermined leakage” here at the “seat” as taught by Webber.

Claim 14 is further, and claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Albertson et al. (U. S. Pat. No. 5,577,389) in view of Szwargulski (U. S. Pat. No. 3,520,330).

The patent to Albertson et al. discloses a “compressor (inherent in the refrigeration circuit), comprising: a safety device (shown in figures 1 and 2 at 9), for limiting high pressure within a chamber (the chamber at conduit 15 which is ultimately fluidly connected to the inherent compressor of the refrigerant circuit) of the compressor, comprising a rupture disk (17) and a pressure relief valve (27), the rupture disk (17) and the pressure relief valve (27) forming a region (volume 20) there-between, the rupture disk (17) having a first side (the side of conduit 15, facing arrow Y)

connected to the compressor chamber and a second side (the side facing conduit 16 and volume 20) connected to the region (20), the rupture disk (17) hermetically sealing the chamber (within conduit 15) from the region (20) until a pressure of the compressor chamber exceeds a predetermined level (such as the level required to rupture disk 17), the pressure relief valve (27)... (is) configured to allow a ... release of the system pressure after the pressure of the compressor chamber exceeds the predetermined level (e.g. the burst pressure of disk 17)” as recited in claim 14.

Thus the patent to Albertson et al. discloses all the claimed features with the exception of having “a predetermined leakage of atmospheric pressure into the region while the pressure of the compressor chamber is below the predetermined level” as well as discussion of whether or not relief valve vents in a “slow” manner.

The patent to Szwargulski discloses, explicitly in figures 1 and 2 for example, that it is known in the art to employ, in a relief valve 14 located in a fluid conduit of no particular utility other than the conduction of fluid, a leak passage in the form of a porous valve head for the purpose of allowing limited fluid flow across the otherwise closed relief valve thus allowing for a slower, relative to a valve element which does not have a leak passage, buildup of pressure necessary to open the closed valve in the upstream passage and to allow for downstream pressure to bleed across the otherwise closed valve towards the upstream direction.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Albertson et al. a porous valve head in the relief valve 27 for the purpose of allowing limited fluid flow across the otherwise closed relief valve thus allowing for a slower, relative to a valve element which does not have a leak passage, buildup of pressure necessary to open the closed valve in the upstream

passage and to allow for downstream pressure to bleed across the otherwise closed valve towards the upstream direction as recognized by Szwargulski.

Regarding claim 23, in Albertson et al., as modified by Szwargulski, "the pressure relief (27 of Albertson et al.) valve includes a valve seat and a valve piston (head), wherein at least one of the valve seat and the valve piston (e.g. the "piston" or valve head) includes a porous material (as taught by Szwargulski) for providing the predetermined leakage" as recited.

Claim 14 is further, and claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Albertson et al. (U. S. Pat. No. 5,577,389) in view of Groat (U. S. Pat. No. 2,451,385).

The patent to Albertson et al. discloses a "compressor (inherent in the refrigeration circuit), comprising: a safety device (shown in figures 1 and 2 at 9), for limiting high pressure within a chamber (the chamber at conduit 15 which is ultimately fluidly connected to the inherent compressor of the refrigerant circuit) of the compressor, comprising a rupture disk (17) and a pressure relief valve (27), the rupture disk (17) and the pressure relief valve (27) forming a region (volume 20) there-between, the rupture disk (17) having a first side (the side of conduit 15, facing arrow Y) connected to the compressor chamber and a second side (the side facing conduit 16 and volume 20) connected to the region (20), the rupture disk (17) hermetically sealing the chamber (within conduit 15) from the region (20) until a pressure of the compressor chamber exceeds a predetermined level (such as the level required to rupture disk 17), the pressure relief valve (27)... (is) configured to allow a ... release of the system pressure after the pressure of the compressor chamber exceeds the predetermined level (e.g. the burst pressure of disk 17)" as recited in claim 14.

Thus the patent to Albertson et al. discloses all the claimed features with the exception of having “a predetermined leakage of atmospheric pressure into the region while the pressure of the compressor chamber is below the predetermined level” as well as discussion of whether or not relief valve vents in a “slow” manner.

The patent to Groat discloses, explicitly in figure 2 for example, that it is known in the art to employ, in a relief valve at 24 located in a refrigerant conducting conduit, a leak passage in the form of a passage 25 located in the valve head 24 for the purpose of allowing limited fluid flow across the otherwise closed relief valve thus allowing for a slower, relative to a valve element which does not have a leak passage, buildup of pressure necessary to open the closed valve in the upstream passage and to allow for downstream pressure to bleed across the otherwise closed valve towards the upstream direction.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Albertson et al. a valve head having a leak passages located in the valve head in the relief valve 27 for the purpose of allowing limited fluid flow across the otherwise closed relief valve thus allowing for a slower, relative to a valve element which does not have a leak passage, buildup of pressure necessary to open the closed valve in the upstream passage and to allow for downstream pressure to bleed across the otherwise closed valve towards the upstream direction as recognized by Groat.

Regarding claim 32, in Albertson et al., as modified by Groat, “the pressure relief valve (27 of Albertson et al.) comprises a valve seat, a valve piston (head), and further comprises a bypass bore at one of the valve seat and valve piston for providing the predetermined leakage”, here the valve piston or head includes a bore as taught by Groat.

Claim 14 is further, and claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Albertson et al. (U. S. Pat. No. 5,577,389) in view of Mathews et al. (U. S. Pat. No. 3,883,030).

The patent to Albertson et al. discloses a “compressor (inherent in the refrigeration circuit), comprising: a safety device (shown in figures 1 and 2 at 9), for limiting high pressure within a chamber (the chamber at conduit 15 which is ultimately fluidly connected to the inherent compressor of the refrigerant circuit) of the compressor, comprising a rupture disk (17) and a pressure relief valve (27), the rupture disk (17) and the pressure relief valve (27) forming a region (volume 20) there-between, the rupture disk (17) having a first side (the side of conduit 15, facing arrow Y) connected to the compressor chamber and a second side (the side facing conduit 16 and volume 20) connected to the region (20), the rupture disk (17) hermetically sealing the chamber (within conduit 15) from the region (20) until a pressure of the compressor chamber exceeds a predetermined level (such as the level required to rupture disk 17), the pressure relief valve (27)... (is) configured to allow a ... release of the system pressure after the pressure of the compressor chamber exceeds the predetermined level (e.g. the burst pressure of disk 17)” as recited in claim 14.

Thus the patent to Albertson et al. discloses all the claimed features with the exception of having “a predetermined leakage of atmospheric pressure into the region while the pressure of the compressor chamber is below the predetermined level” as well as discussion of whether or not relief valve vents in a “slow” manner.

The patent to Mathews et al. discloses, explicitly in figures 4 and 5 for example, that it is known in the art to employ, in a relief valve at 43 located in a fluid conducting conduit, a leak passage in the form of “ a surface roughness” at score or texture 48 of the valve head 43 for the purpose of allowing limited fluid flow across the otherwise

closed relief valve thus allowing for a slower, relative to a valve element which does not have a leak passage, buildup of pressure necessary to open the closed valve in the upstream passage and to allow for downstream pressure to bleed across the otherwise closed valve towards the upstream direction.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Albertson et al. a valve head at relief valve 27 having a leak passages located on the valve head in the form of a score or texture, i.e. "surface roughness" for the purpose of allowing limited fluid flow across the otherwise closed relief valve thus allowing for a slower, relative to a valve element which does not have a leak passage, buildup of pressure necessary to open the closed valve in the upstream passage and to allow for downstream pressure to bleed across the otherwise closed valve towards the upstream direction as recognized by Mathews et al.

Regarding claim 33, in Albertson et al. as modified by Mathews et al. "the pressure relief valve (27 of Albertson et al.) comprises a valve seat, a valve piston (head), and further comprises surface roughness at one of the valve seat and valve piston for providing the predetermined leakage" here a "surface roughness" in the form of scores or a texture on the valve head as taught by Mathews et al.

Allowable Subject Matter

Claim 25 is allowed.

Response to Arguments

In response to applicants remarks as they may apply, the argument that the modification of Albertson et al. in view of Webber, Szwargulski, Groat or Mathews is improper by reason that:

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“...there is absolutely no reason or motivation for one of ordinary skill in the art to place a fluid leakage passage in Albertson et al. as asserted. Placing a leakage passage at check valve 27 of Albertson would go against the purpose of the invention for collecting rupture disk fragments in the collection trap. If Albertson were modified to include a leakage passage at check valve 27, rupture disk fragments would flow through such leakage passages and defeat the purpose of the invention”

is unpersuasive in view of the reasons or motivation expressly taught by Webber, Szwargulski, Groat or Mathews and the express teachings in Albertson et al.

As detailed above, each of Webber, Szwargulski, Groat or Mathews teaches one of ordinary skill in the art a specific manner in which to include a fluid leak passage in an otherwise closed “check valve” for the purpose of permitting fluid to pass an otherwise closed check valve element thus allowing for a slower, relative to a valve element which does not have a leak passage, buildup of pressure necessary to open the closed valve and to allow for downstream pressure to bleed across the otherwise closed valve towards the upstream direction.

Further, in Albertson et al., at column 3, lines 26-41, there is disclosed the operation of the device of Albertson et al. as illustrated in figure 3. Upon rupture of rupture disk 17 the:

“discharge of the pressurized refrigerant into the housing 19 has sufficient force to carry the fragments 17a past the flange 26 and into the container 23 that is disposed adjacent the end plate 37. The momentum of fragments 17a carry them into the internal volume 23d... where they engage the tack compound 24. With the fragment collection trap 10 having contained the fragments 17a, the mechanical valve 27 is able to re-seat when the pressure drops below a predetermined threshold.”

As disclosed, during venting of pressure from the system, after the disk has ruptured, fragments of the rupture disk do not pass to the check valve 27. Rather, their

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momentum carries them into a collection zone where they remain due to adherence to a tacky compound. Accordingly, in the event Albertson et al. is modified to include a leak passage, as taught by either one of Webber, Szwargulski, Groat or Mathews, fragments of the ruptured rupture disk do not pass to the check valve and leak to atmosphere as argued.

Conclusion

All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHN RIVELL whose telephone number is (571)272-4918. The examiner can normally be reached on Mon.-Fri. from 6:00am-2:30pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on (571) 272-4777. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**/John Rivell/
John Rivell
Primary Examiner
Art Unit 3753**